

IN THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the instant application.

Listing of Claims:

1. (Currently Amended) A method executed by a mechanical, electronic or computer system for generating machine control instructions, ~~the said~~ method comprising the steps of:

reading in a user input to select an object from a library of objects, wherein the objects consist of include one or more sets of machine control instructions for performing one or more functions;

connecting the selected object to a network of objects ~~consisting of these which includes~~ objects previously selected and connected by the user[.];

~~including said connecting step comprising~~ identifying the inputs and outputs of the selected object selected in said reading step and connecting ~~these such~~ inputs and outputs to ~~the~~ inputs and outputs of ~~the~~ other objects in the network;

said connecting step resulting in the formation of an aggregate comprising the network of objects and the connections between connected objects;

generating machine control instructions ~~using via employing the instructions now contained~~ in the network of objects;

updating responsive to said generating step, effecting updates within the aggregate of the network of objects and the connections in the network between connected objects to accurately reflect any changes made to the generated machine control instructions generated in said generating step or to the network of objects.

2. (Currently Amended) The method of claim 1, wherein ~~the generation said generating step and said updating step of effecting updates~~ are deferred until the user has completed constructing ~~the an~~ entire network of objects.

3. **(Original)** The method of claim 1, wherein the functions contained in the objects are used to generate the corresponding sets of instructions for inclusion in the generated machine control instructions.
4. **(Currently Amended)** The method of claim 1, wherein the generated code ~~consists of machine control instructions~~ include computer instructions to load the code libraries represented by the objects.
5. **(Original)** The method of claim 1, wherein the user is a computer program.
6. **(Original)** The method of claim 1, wherein the machine control instructions are computer instructions belonging to an instruction set architecture.
7. **(Currently Amended)** The method of claim 1, wherein the machine control instructions ~~consist of~~ include source code in a computer programming or scripting language.
8. **(Currently Amended)** The method of claim 1, ~~with the additional final step further comprising the step of~~ translating or compiling the machine control instructions into another format of machine control instructions.
9. **(Original)** The method of claim 1, wherein the library of objects includes primitive operators for mathematical operations.
10. **(Original)** The method of claim 1, wherein the library of objects includes container objects that contain other objects or data.

11. (Original) The method of claim 1, wherein the user input is generated by the manipulation of graphical depictions of objects on a computer or video display screen or monitor, said manipulation being controlled by a computer mouse or a keyboard or some combination of a computer mouse and keyboard.

12. (Original) The method of claim 1, wherein the user inputs include the manipulation in physical space of virtual representations of the objects, provided by a virtual reality system.

13. (Original) The method of claim 12, wherein the virtual reality system includes a force-feedback or haptic interface.

14. (Currently Amended) The method of claim 1, wherein the user input ~~consists of~~ includes the movement and connection of physical objects in physical space corresponding to objects in the library.

15. (Currently Amended) The method of claim 1, further ~~consisting of~~ comprising the step of removing any number of objects from the network in response to user inputs.

16. (Currently Amended) The method of claim 1, further ~~consisting of~~ comprising the step of modifying existing connections of objects in the network in response to user inputs.

17. (Currently Amended) The method of claim 1, further ~~consisting of~~ comprising the step of monitoring or tracing the path of data flow and execution of the generated code by visually indicating activity in active objects in the network.

18. (Original) The method of claim 1, wherein the user inputs are provided by at least one user over a network connection.

19. (Currently Amended) The method of claim 1, wherein said step of updating the network of objects includes effecting updates comprises updating the network of objects to reflect changes made by at least one remote user over a network connection.

20. (Currently Amended) The method of claim 1, further consisting of comprising the step of creating at least one new object of machine control instructions from the generated code.

21. (Currently Amended) A method for constructing a high-level object model from generated machine control instructions, the said method comprising the steps of:

reading in a sequence of machine control instructions for performing one or more functions;
searching a library of objects for one or more matching objects that generate configured for generating the sequence of machine control instructions read in in said reading step;
parsing each matched sequence of machine control instructions so matched to determine the objects connected to the inputs and outputs of each matching object found in the library of objects in said searching step;

connecting each matched matching object found in the library of objects to the other objects in the a high-level model found in the previous reading, searching and parsing steps.

22. (Currently Amended) The method of claim 21, wherein the original machine control instructions were have been generated from a source file by a compiler.

23. (Original) The method of claim 21, wherein the user is a computer program.

24. (Currently Amended) The method of claim 21, with further comprising the additional a final step of generating machine control instructions from the high-level model.

25. (Original) The method of claim 24, wherein the format of the newly generated machine control instructions differs from that of the original machine control instructions.

26. (Currently Amended) The method of claim 21, further ~~consisting of~~ comprising the step of modifying connections of objects in the network in response to user inputs.

27. (Currently Amended) The method of claim 21, further ~~consisting of~~ comprising the step of monitoring or tracing the path of data flow and execution of the generated code by visually indicating activity in active objects in the network.

28. (Original) The method of claim 21, wherein the user inputs are provided by at least one user over a network connection.